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(71) Applicant (for all designated States except US): LICA
PHARMACEUTICALS A/S [DK/DK]; Fruebjergvej 3,
DK-2100 Copenhagen Ø (DK).

(72) Inventor; and

(75) Inventor/Applicant (for US only): NIELSEN, Simon,
Feldbæk [DK/DK]; Åfaldet 72, DK-2730 Herlev (DK).

(74) Agent: INSPICOS A/S; Bøge Allé 5, P.O. Box 45,
DK-2970 Hørsholm (DK).

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(54) Title: QUATERNARY AMINO-FUNCTIONAL CHALCONES

(57) Abstract: The present invention provides novel quaternary amino-functional chalcone derivatives and analogues exhibiting interesting antibacterial activity. The compounds have the general formula $(Y^1)_m-Ar^1(X^1)-C(=O)Var^2(X^2)-(Y^2)_p$ (I), wherein V designates $-CH_2-CH_2-$, $-CH=CH-$ or $-C=C-$; Ar^1 and Ar^2 independently are aryl and heteroaryl; $m=0, 2$, $p=0, 1, 2$, $m+p>0$; each Y^1 and Y^2 independently is $-Z-N^+(R^1)(R^2)R^4 Q^-$ (A); $-NR^3-Z-N^+(R^1)(R^2)R^4 Q^-$ (B), or $O-Z-N^+(R^1)(R^2)R^4 Q^-$ (C), $R^1, R^2, R^3, R^4, X^1, X^2$ are substituents, and Q^- is an anion. The present invention also relates to the compounds for use as pharmaceutically active agents, in particular against bacterial infections (such as Gram-negative and Gram-positive bacteria, including antibiotic-sensitive or resistant strains), and in the medical treatment of bacterial infections in mammals.

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